AF

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Hanyu

Serial No.: 10/602,197

Confirmation No.: 2213

Filed: June 24, 2003

For: Heat-Sealable Films

§ Group Art Unit: 1732

§ Examiner: Eashoo

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

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TRANSMITTAL LETTER AND FEE AUTHORIZATION

In connection with the above identified application, Applicants respectfully submit the following documents:

1. Copy of Substitute Appeal Brief filed by facsimile on August 18, 2006 in response to Notice of Non-Compliant Appeal Brief.

No fee is believed due with this submission.

Respectfully submitted,

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Hanyu § Atty. Dkt. No.: COS-766DIV
§
Serial No.: 10/602,197 § Group Art Unit: 1732
§
Confirmation No.: 2213 §
§
Filed: June 24, 2003 § Examiner: Eashoo
§
For: Heat-Sealable Films § Cust. No.: 25264
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TRANSMITTAL LETTER AND FEE AUTHORIZATION

In connection with the above identified application, Applicants respectfully submit the following documents:

1. Substitute Appeal Brief in Response to Notice of Non-Compliant Appeal Brief.

No fee is believed necessary with this submission.

Respectfully submitted,

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COS-766D1 AB fee auth.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of: Hanyu	§	
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Serial No.: 10/602,197	§	Group Art Unit: 1732
	§	
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Filed: June 24, 2003	§	Examiner: Eashoo
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	§	
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APPEAL BRIEF

Appellants submit this Appeal Brief to the Board of Patent Appeals and Interferences on appeal from the decision of the Examiner of Group Art Unit 1732 dated November 16, 2005, finally rejecting claims 21-26.

Real Party in Interest

The present application has been assigned to Fina Technology Inc., P.O. Box 674412, Houston, Texas 77267.

Related Appeals and Interferences

Appellants assert that no other appeals, interferences or judicial proceedings are known to the Appellants, the Appellants' legal representative or Assignee that will

directly affect, be directly affected by or have a bearing on the Board's decision in the pending appeal.

Status of Claims

Claims 21-26 are pending in the application and were originally presented in the application. Claims 21-26 stand rejected under 35 U.S.C. §103(a). The rejection of the pending claims is appealed. The pending claims are shown in the attached Appendix A.

Status of Amendments

No amendments were made to the pending claims in response to the Final Office Action.

Summary of Claimed Subject Matter

Embodiments of the invention generally include processes for the production of multilayer, *e.g.*, biaxially-oriented, films having enhanced heat seal and hot tack characteristics. *See,* specification, at least page 11, lines 4-10. The films include a substrate layer formed by providing a first polymer, such as a crystalline thermoplastic polymer, extruding the first polymer and forming the first polymer into a flexible substrate layer having an interface surface. *See, Id.* at least page 12, lines 14-18.

The film further includes a heat-seal layer (*e.g.*, surface layer) formed from providing a second polymer including essentially syndiotactic propylene polymer having a melt flow index of less than 2 grams/10 minutes, which is produced by the polymerization of propylene in the presence of a syndiospecific metallocene catalyst effective to form a surface layer capable of producing a heat seal with itself at a seal temperature less than 110°C and extruding the syndiotactic propylene polymer to form a surface layer. *See, Id.* at least page 12, lines 20-24, page 16, lines 21-22, page 17, lines 15-20 and page 22, lines 16-20.

The processes further include bonding the surface layer to the interface surface of the substrate layer to form a multilayer film having a surface layer of syndiotactic propylene polymer which has a thickness that is less than the thickness of the substrate layer. *See, Id.* at least page 17, lines 22-23.

One or more processes further include co-extruding the first and second polymer through a slotted die system at a temperature of from 150°C to 260°C to form the film. *See, Id.* at least page 9, lines 15-20.

Grounds of Rejection to be Reviewed on Appeal

1. The rejection of claims 21-26 under 35 U.S.C. §103(a) as being unpatentable over *Bothe* in view of *Peete*.

Arguments

I. THE EXAMINER ERRED IN REJECTING CLAIMS 21-26 UNDER 35 U.S.C. §103(a) AS BEING UNPATENTABLE OVER *BOTHE* IN VIEW OF *PEET* BECAUSE A PRIMA FACIE CASE OF OBVIOUSNESS HAS NOT BEEN PRESENTED.

The Examiner states that while *Bothe* does not teach a surface layer comprising syndiotactic polypropylene having a melt flow index of less than 2 grams/10 minutes, *Peet* teaches surface layers comprising such a melt flow index. *See*, Final Office Action at page 2, paragraph 6. Further, the Examiner states that *Bothe* and *Peet* are combinable because they are from the same field of endeavor, namely, multi-layer films and that at the time of invention a person of ordinary skill in the art would have found it obvious to use a surface layer comprising syndiotactic polypropylene having a melt flow index of less than 2 grams/10 minutes, as taught by *Peet*, in the process of *Bothe* because *Peet* suggests that such syndiotactic polypropylene is suitable for surface layers of multilayer films. *See, Id.*

It is well settled that the Examiner bears the initial burden of establishing a prima facie case of obviousness. *See*, *In re Piasecki*, 745 F.2d 1468, 1472, 223 U.S.P.Q. 785, 788 (Fed. Cir. 1984.) Appellants strongly disagree that the Examiner has established a prima facie case of obviousness. To establish a prima facie case, the PTO must satisfy three requirements. First, the prior art relied upon, coupled with the knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or to combine references. *See, Karsten Mfg. Corp. v. Cleveland Gulf Co.*, 242 F.3d 1376, 1385, 58

U.S.P.Q.2d 1286, 1293 (Fed. Cir. 2001.) Second, the proposed modification of the prior art must have had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the time the invention was made. *See, Amgen, Inc. v. Chugai Pharm. Co.*, 927 F.2d 1200, 1209, 18 U.S.P.Q.2d 1016, 1023 (Fed. Cir. 1991.) The mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification. *In re Gordon*, 733 F.2d 900, 902, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984.)

Bothe teaches a multilayer polypropylene film characterized by good optical properties. *See*, at least column 1, lines 5-15 and column 6, lines 30-39. The multilayer polypropylene film includes a base layer formed of a polypropylene having a melting point of 140°C or greater, such as isotactic polypropylene. *See*, at least column 2, lines 25-35. The multilayer polypropylene film further includes a top layer formed of a polypropylene having a mean length of syndiotactic sequences that is greater than 20 and a high melt flow index (*e.g.*, 28 g/10 min.) *See,* at least column 2 at lines 65-70 and column 5, lines 45 and 57.

Peet teaches a biaxially oriented multilayer film structure having a substrate formed from high density polyethylene and at least one skin layer (*e.g.*, surface layer) formed from syndiotactic polypropylene to improve barrier properties. *See*, column 2, lines 39-44 and column 4, lines 41-45. The syndiotactic polypropylene has a melt flow index of from about 1.5 g/10 min. to about 5 g/10 min. *See*, column 4, lines 10-15.

If a proposal for modifying the prior art in an effort to attain the claimed invention causes the art to become inoperable or destroys its intended function, then the requisite motivation to make the modification would not have existed. *See, In re Fritch*, 972 F.2d 1260, 1265, 23 U.S.P.Q.2d 1780, 1783 (Fed. Cir. 1992,) *In re Ratti,* 270 F.2d 810, 813, 123 U.S.P.Q. 349, 352 (C.C.P.A. 1959) (holding the suggested combination of references improper because it "would require a substantial reconstruction and redesign of the elements shown in [a prior art reference] as well as a change in the basic principles under which [that reference's] construction was designed to operate.") While the Examiner asserts that it would be obvious to replace a high MFI polypropylene with a low MFI polypropylene simply because two references teach multilayer films, it is well known in the art that as the MFI of a polymer decreases, the optical properties, such as gloss, also

deteriorate. *See*, Cabot Corp. Film: General Application Guide < http://www.cabot-corp.com/cws/businesses.nsf/CWSID/cwsBUS17122001093208265?OpenDocument&bc=Products+%26+Markets/Film/Application+Info&bcn=23/4294967115/3045&entry=market>. *Bothe* is aimed at increasing gloss and therefore there is no motiviation to modify the primary reference with a low MFI (low gloss) polymer as taught by *Peet*.

Accordingly, a prima facie case of obviousness has not been presented and the references of record do not teach, show or suggest producing a multilayer film having a substrate layer comprising a first crystalline thermoplastic polymer and a surface layer comprising a polymer consisting essentially of a syndiotactic propylene polymer having a melt flow index of less than 2 g/10 minutes, as recited in pending claim 21. Therefore, reversal of the rejection is respectfully requested.

Conclusion

In conclusion, a prima facie case of obviousness has not been presented. Thus, Appellants respectfully request reversal of the rejections of claims 21-26.

Respectfully submitted,

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Appendix A

Pending Claims

21. In a process for the production of a multilayer film having a substrate layer and a surface layer, the process comprising:

(a) providing a first crystalline thermoplastic polymer;

(b) extruding the first crystalline thermoplastic polymer and forming the first crystalline thermoplastic polymer into a flexible substrate layer having an interface surface;

(c) providing a second polymer comprising a polymer consisting essentially of a syndiotactic propylene polymer having a melt flow index of less than 2 grams/10 minutes produced by the polymerization of propylene in the presence of a syndiospecific metallocene catalyst effective to form a surface layer, the surface layer capable of producing a heat seal with itself at a seal temperature less than 110°C;

(d) extruding the syndiotactic propylene polymer to form a surface layer; and

(e) bonding the surface layer to the interface surface of the substrate layer to form a multilayer film having a surface layer of syndiotactic propylene polymer which has a thickness that is less than the thickness of the substrate layer.

22. The process of claim 21 wherein the first polymer is an isotactic propylene polymer.

23. The method of claim 21 wherein the substrate layer film is formed by orienting the substrate layer form in at least one direction and thereafter forming the surface layer by extrusion-coating the syndiotactic polypropylene on to the oriented substrate layer film.

24. The process of said claim 21 wherein said multilayer film is formed by co-extruding the first and second polymers through a slotted die system to form a multilayer film comprising a substrate layer of the first polymer and a surface layer of the second polymer and thereafter orienting the film in the machine direction followed by orienting the film in the transverse direction to form a biaxially-oriented multilayer film.

25. In a process for the production of a multilayer film having a substrate layer and a surface layer, the process comprising:

(a) providing a first polymer to form the substrate layer of a multilayer film;

(b) providing a second polymer comprising a polymer consisting essentially of a syndiotactic propylene polymer having a melt flow index of less than 2 grams/10 minutes produced by the polymerization of propylene in the presence of a syndiospecific metallocene catalyst effective to form a heat-sealable surface layer of said multilayer film; and

(c) co-extruding said first and second polymers through a slotted die system at a temperature within the range of 150°-260°C to form a film comprising a substrate layer of said first polymer and a surface layer of said second polymer of a thickness which is less than the thickness of said substrate layer.

26. The process of claim 25 wherein the surface layer of said second polymer is effective in producing a heat seal with itself at a seal temperature of no more than 110°C.

Appendix B

Evidence

1. *In re Piasecki*, 745 F.2d 1468, 1472, 223 U.S.P.Q. 785, 788 (Fed. Cir. 1984.)

2. *Karsten Mfg. Corp. v. Cleveland Gulf Co.*, 242 F.3d 1376, 1385, 58 U.S.P.Q.2d 1286, 1293 (Fed. Cir. 2001.)

3. *Amgen, Inc. v. Chugai Pharm. Co.*, 927 F.2d 1200, 1209, 18 U.S.P.Q.2d 1016, 1023 (Fed. Cir. 1991.)

4. *In re Gordon*, 733 F.2d 900, 902, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984.)

5. *In re Fritch*, 972 F.2d 1260, 1265, 23 U.S.P.Q.2d 1780, 1783 (Fed. Cir. 1992,) *In re Ratti,* 270 F.2d 810, 813, 123 U.S.P.Q. 349, 352 (C.C.P.A. 1959.)

6. Cabot Corp. Film: General Application Guide < http://www.cabot-corp.com/cws/businesses.nsf/CWSID/cwsBUS1712200109320826 5?OpenDocument&bc=Products+%26+Markets/Film/Application+Info&bcn=23/4294967115/3045&entry=market>.

Appendix C

Related Proceedings

Not Applicable

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